In eukaryotes and prokaryotes, protein localization pathways transport proteins efficiently from sites of synthesis to sites of function. As part of this critically important process, signal recognition particles (SRP) and their receptors target proteins to specific membranes in the cell. In plants, some of the proteins required for photosynthesis are encoded by nuclear DNA; after translation, these must get directed to the thylakoid membrane in chloroplasts for proper assembly and functioning of light-harvesting complexes. In an article featured as Paper of the Week in the *Journal of Biological Chemistry* (**284**:14891–14903), Dr. Ralph Henry and colleagues from the University of Arkansas describe the identification and biochemical characterization of a domain in the chloroplast SRP receptor protein cpFtsY. They determined that this domain mediates the association of cpFtsY and its protein cargo, the light harvesting chlorophyll a/b-binding proteins, with the thylakoid membrane. Dr. Henry and colleagues also found that the cpFtsY binding domain is conserved in structure and mechanism with a similar protein in bacteria *E. coli*. These findings provide valuable insight into protein transport to the chloroplast and, given the conserved nature of SRPs, for cellular protein transport in general.